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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,338	09/02/2003	Brian Michael Curtis	60,426-620	2953

7590 12/22/2004

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EXAMINER
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DUNN, DAVID R

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/653,338

Applicant(s)

CURTIS ET AL.

Examiner

David Dunn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/2/03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The Preliminary Amendment filed 9/02/03 is acknowledged. Claims 1-20 have been canceled; claims 21-28 are now pending.

#### ***Information Disclosure Statement***

1. The information disclosure statement filed 9/02/03 is acknowledged. See enclosed IDS forms.

#### ***Specification***

2. The disclosure is objected to because of the following informalities: on page 5, line 19, "strain gauge 26" should be --strain gauge 56--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 24-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 24 is indefinite as the claim recites "a sensor"; however, "a sensor" was previously recited in claim 21. It is unclear if the "sensor" of claim 24 is the same as that claimed in claim 21 or not.

Claim 25 recites the limitation "said sensor assembly". There is insufficient antecedent basis for this limitation in the claim.

Claims 26-28 recite "[t]he assembly" in the preamble; these claims are dependent upon a method claim. It is recommended that "assembly" be amended to --method-- in claims 26-28 to be consistent.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Stanley et al. (5,965,827).

Stanley et al. discloses a method of differentiating between the presence of a human occupant and a child restraint seat in a motor vehicle, the method comprising: sensing tension (see, for example, column 4, lines 37-44) exerted on a seat belt (12) with a sensor fixed along said seat belt (see Figure 1); communicating the magnitude of the sensed tension to a controller (column 4, lines 52-56); comparing the magnitude of tension to a predetermined tension (column 4, lines 56-60); and determining that a child restraint seat is present if the sensed tension is

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greater than the predetermined tension (see also, column 2, lines 55-63). The method includes disabling an airbag system (column 4, lines 56-60). The predetermined tension is a tension not tolerable by human occupants (column 2, lines 55-63).

7. Claims 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller (6,205,868).

Miller discloses a method of differentiating between the presence of a human occupant and a child restraint seat in a motor vehicle, the method comprising: sensing tension exerted on a seat belt with a sensor fixed along said seat belt (see Figures 3 and 4); communicating the magnitude of the sensed tension to a controller; comparing the magnitude of tension to a predetermined tension (see column 4, lines 25-35); and determining that a child restraint seat is present if the sensed tension is greater than the predetermined tension. The method includes disabling an airbag system. The predetermined tension is a tension not tolerable by human occupants (column 2, lines 50-58).

8. Claims 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki (6,264,236).

Aoki discloses a method of differentiating between the presence of a human occupant and a child restraint seat in a motor vehicle, the method comprising: sensing tension exerted on a seat belt with a sensor fixed along said seat belt (see Figure 4a; column 9, lines 45-48); communicating the magnitude of the sensed tension to a controller; comparing the magnitude of tension to a predetermined tension (see column 9, lines 50-60); and determining that a child restraint seat is present if the sensed tension is greater than the predetermined tension. The method includes disabling an airbag system. The predetermined tension is a tension not tolerable

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by human occupants (column 2, lines 50-58). Aoki shows the sensor being a strain gauge (column 7, lines 30-35). Regarding claim 25, the location of the strain gauge is inherently a "tensile section" (note: this is a relative term with no clear limits).

*Claim Rejections - 35 USC § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki in view of Stanley et al.

Aoki is discussed above but does not describe the predetermined tension being that which is not normally tolerable for human occupants.

Stanley et al. is discussed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Aoki with the teachings of Stanley to set the threshold and the level which is not tolerable for human occupants so that the system could accurately have a level which would not normally be a human occupant.

*Allowable Subject Matter*

11. Claims 26-28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to show a method of sensing a child seat by sensing tension on the seat belt by a sensor fixed along the seat belt and comparing the tension against a predetermined tension, wherein the sensor has a strain gauge and a carrier with a) two belt loops on opposite ends, or b) three prongs extending from a common beam. While Miller shows a belt tension sensor with four prongs, it does not include a strain gauge. Modification of the Miller reference to include a strain gauge would require hindsight reasoning and would destroy the sensor as taught by Miller.

*Conclusion*

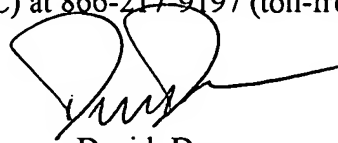
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. David shows a belt tension sensor.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Dunn whose telephone number is 703-305-0049. The examiner can normally be reached on Mon-Thur, alt. Fridays, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'David Dunn', is written over the printed name.

David Dunn  
Primary Examiner  
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